

# **Alternative Volume Performance Standards for Medicare Physicians' Services**

## **Strengths and Limitations**

M. Susan Marquis, Gerald F. Kominski

**RAND**

The research described in this report was supported by the Health Care Financing Administration, U.S. Department of Health and Human Services, Cooperative Agreement 99-C-98489/9-07.

ISBN: 0-8330-1260-6

RAND is a nonprofit institution that seeks to improve public policy through research and analysis. Publications of RAND do not necessarily reflect the opinions or policies of the sponsors of RAND research.

Published 1992 by RAND  
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138

R-4154-HCFA

# **Alternative Volume Performance Standards for Medicare Physicians' Services**

## **Strengths and Limitations**

M. Susan Marquis, Gerald F. Kominski

Supported by the  
Health Care Financing Administration,  
U.S. Department of Health and Human Services

**RAND**

RAND/UCLA/Harvard  
Center for Health Care  
Financing Policy Research



## PREFACE

Beginning in 1990, Medicare will set volume standards, and subsequent payment updates for physician fees will depend on the difference between actual volume and the standard. This report provides an analysis of the strengths and weaknesses of alternative choices that Medicare might adopt concerning the scope and nature of the standard, the risk pool, and the application of the standard.

This project was performed within the RAND/UCLA/Harvard Center for Health Care Financing Policy Research, which is supported by the Health Care Financing Administration. The report will be of interest to those who formulate health policy for elderly Americans as well as to the health-research community.





## SUMMARY

Abstract

The Omnibus Budget Reconciliation Act of 1989 (OBRA89) provides for the establishment of Medicare volume performance standards (VPSs) beginning in 1990. Under the VPS policy, payment updates for physicians' fees may depend on the difference between the actual rate of growth in expenditures for physicians' services and a performance standard established for the year. The goal of this study is to provide a framework for analyzing the strengths and weaknesses of a range of different VPSs. Establishing a VPS policy requires making choices along three dimensions: the risk pool, the scope and nature of the standard, and the application of the standard. We evaluate the likely effectiveness of each choice in providing incentives to control cost and consider possible adverse outcomes and administrative problems.

### CHOICE OF RISK POOL

The current policy includes the entire nation in a single risk pool. States have been proposed as an alternative geographic risk unit because of the effectiveness of geographically based VPSs in other countries, the potential for greater use of carrier data by state medical societies, and the potential for improving the equity of per capita expenditures for Part B services across states. For the state's physician community to effectively develop strategies to contain growth and meet the target, it must have some liberty to adopt policies that will achieve the objective. However, without standardized policies imposed by Medicare, variations between states may arise in policies affecting Medicare beneficiaries that will raise questions of inequity. The greatest limitation of state-level VPSs, however, is the considerable variation in annual expenditures within states. This suggests that state targets should be based on national utilization patterns, adjusted for population mix, and that there should be limits on the degree to which differences in measured performance and the target are incorporated in payment updates.

The geographic market areas used to adjust payments under the fee schedule offer a conceptually appealing alternative to states because they represent markets in which all physicians receive the same adjusted payment for Part B services. The payment system assumes that physicians in the same market area face similar economic conditions with regard to cost of living, office expenses, and malpractice

costs. If physicians' practice patterns and their response to VPSs are related to market-specific conditions, then state-level rather than market-level VPSs could distort incentives across markets. However, a disadvantage of market-level VPSs arises because payment areas are not consistently defined. In some states, there is a single payment area. In other states, there are multiple areas made up of contiguous counties. In still other states, groups of noncontiguous counties form localities. Therefore, using payment areas to set standards may raise questions of equity across states. Moreover, problems of data unreliability are likely to be even greater for substate payment areas than for the state as a whole.

Group-specific VPSs present enormous administrative challenges and may provide incentives for strategic patient selection. An important limitation of group-specific VPSs is that physicians have an incentive to withhold necessary services or to refer their patients to other physicians outside their group unless physicians are at risk for all services provided to their patients. However, an organized group of physicians can translate a collective financial incentive into incentives for the individual physicians depending on the risk-and-reward system that the organization develops. Peer pressure and utilization management may be more effective in altering performance in organized physician groups than in geographic groups.

Another alternative for defining the risk pool is physician specialty societies. Despite the advantage of a strong, identifiable organizational structure, specialty-specific VPSs would reintroduce specialty differentials into the payment system and thus undermine one of the goals of physician payment reform.

## **SCOPE AND NATURE OF THE STANDARD**

The second major dimension in defining a standard involves the scope of services for which physicians should be placed at risk, the nature of the standard itself, and the method of establishing the standard.

### **Scope of Services in the Standard**

The most basic issue regarding the scope of services is whether physician groups should be placed at risk for only those services they provide to their patients or whether groups should be responsible for all services provided to their patients, including those provided by physicians outside the group. The former provides the weakest incentives for cost control and might distort referral and treatment patterns. Including out-of-group use in the performance standard pro-



vides stronger incentives to control use but poses administrative burdens, since all services delivered to a patient need to be attributed to one group, even if the services are performed by physicians belonging to different groups. Another important administrative issue would be how a physician group would be compensated for the services it delivered to patients of another group.

A second issue is whether the physician target should include all physician services, all Part B services, or all Medicare-covered services. Limiting the scope to physician services provides some incentive to overutilize nonphysician services. Including Part A services in the standard would provide incentives to shift inpatient care to the less costly ambulatory setting.

### **Type of Target**

A fundamental issue in developing VPSs is whether to establish *growth rate* targets or *expenditure* or *utilization* targets. Growth rate targets are conceptually attractive because the objective of VPS is to control the growth in expenditures. However, growth rate targets establish current utilization patterns as the basis for evaluating future performance and thus do not address the issue of whether those utilization patterns are appropriate or equitable. Expenditure- or utilization-level targets offer greater flexibility in meeting policy objectives.

### **Type of Service**

A global standard would be a target increase or expenditure level that covers all services. Alternatively, different targets can be set for different types of service. Setting separate standards for different types of service allows policymakers to focus controls on services that have exhibited rapid volume increases and provides another policy mechanism for stimulating desired provider behavior. However, separate standards could lead to payment differences among types of service that do not reflect differences in resource costs. Furthermore, separate standards rely on political, rather than clinical, judgment about the appropriate mix of services.

## **APPLICATION OF THE STANDARD**

Implementing the standard involves making choices about whether to use it to adjust future updates to prices, to determine total per capita payments, or to establish payment ceilings. The current Medicare

VPSs are used to adjust future prices. Successful models in other countries have adopted payment ceilings, which necessarily control program costs. However, little is known about how physicians change behavior in response to ceilings. Evidence shows that per capita payment does result in a less costly style of practice. However, little is known about whether per capita payment alters the *rate of growth* in utilization.

## CONCLUSION

We conclude that VPSs will be most effective in controlling expenditures and changing physician behavior if they are defined using:

- states;
- all Medicare Part B services, possibly expanded to include Part A services; and
- per capita utilization targets.

Establishing separate standards for voluntarily formed groups of physicians, called “carve-out” groups, poses substantial administrative challenges and potential adverse outcomes. Instead of allowing carve-out groups for VPS, the Health Care Financing Administration should continue to encourage prepaid plans because capitated payment systems have been demonstrated to be effective in lowering health care use.

Under current law, VPS will be used to adjust future price increases. Other countries have successfully controlled costs with expenditure ceilings, though there is limited evidence as to how practice patterns have responded to these ceilings. Ceilings present a political battle that Congress may not wish to tackle unless the current method of using VPSs to adjust future prices proves unsuccessful.

There remains a great deal of uncertainty about how physicians will respond to the new Medicare fee schedule and to the VPS. Furthermore, the success or failure of the current method of defining and applying VPSs is unlikely to be known for several more years. The interim period provides a unique opportunity to conduct empirical research to determine how physicians actually respond to the economic incentives of the new system. The findings from research on the early impact of the fee schedule and VPSs should prove invaluable in developing future refinements.

## ACKNOWLEDGMENTS

We would like to thank Sherry Terrell, our federal project officer at the Health Care Financing Administration, and our colleagues Stephen Long and Thomas Rice for helpful reviews and suggestions on a preliminary draft of this report. We are also grateful to Linda Lenhoff for editorial assistance and Barbara Thurston for preparation of the manuscript.





# CONTENTS

PREFACE .....	iii
SUMMARY.....	v
ACKNOWLEDGMENTS .....	ix
TABLES .....	xiii
Section	
1. BACKGROUND AND OBJECTIVES .....	1
2. EFFECTS OF VOLUME PERFORMANCE STANDARDS .....	4
3. EFFECTS OF RISK POOL CHOICES .....	7
Geographic Units .....	7
Delivery Organizations .....	11
Other Professional Membership .....	14
4. SCOPE AND NATURE OF THE STANDARD .....	16
Scope of Services in the Standard .....	16
Nature of the Standard .....	20
Establishing the Standard .....	25
5. APPLICATIONS OF THE STANDARD .....	28
Adjusting Future Prices .....	28
Determining Total Per Capita Payments .....	30
Establishing Payment Ceilings .....	30
6. SYNTHESIS AND CONCLUSIONS .....	32
Choice of Risk Pool .....	32
Scope and Nature of the Standard .....	33
Application of the Standard .....	35
Physician Response to the Fee Schedule and VPSs .....	36
BIBLIOGRAPHY .....	37





## TABLES

1.	Inventory of Alternative Characteristics for VPS Policies . . . . .	3
2.	Effects of Risk Pool Choices . . . . .	8
3.	Effects of the Scope of Services Included in the Standard . . . . .	17
4.	Effects of Choices About the Nature of the Standard . . . .	21
5.	Effects of How the Standard Is Applied . . . . .	29



# 1. BACKGROUND AND OBJECTIVES

The Omnibus Budget Reconciliation Act of 1989 (OBRA89) provides for the establishment of Medicare volume performance standards (VPSs) beginning in 1990. Under the VPS policy, payment updates for physicians' fees may depend on the difference between the actual rate of growth in expenditures for physicians' services and a performance standard established for the year. The purpose of this policy is to control Medicare outlays by providing physicians with the incentive to prescribe appropriate and efficient services.

The VPS policy is one component of legislation that will reform the way that Medicare pays for physicians' services. A central feature of the new payment system is a fee schedule based on a resource-based relative value schedule (RBRVS). The Medicare Fee Schedule replaces the current prices for physician services and procedures—based on customary, prevailing, and reasonable charges—with prices based on physician work plus overhead and malpractice expenses. However, while the new system gives Medicare greater control over these prices paid for services, the total cost of physician services in Medicare might actually increase if physicians respond to changes in the level of fees and relative fees by increasing the volume of services. There is some empirical evidence to suggest that fee constraints do lead to increases in utilization (Rice and McCall, 1982; Gabel and Rice, 1985; Reinhardt, 1985; Holahan et al., 1979). Indeed, many countries that pay for physician care according to a fee schedule for services have adopted overall budget constraints or targets as a mechanism to control quantity and total expenditure.

Mindful of these experiences, the framers of the Medicare reform legislation included a national VPS to control total spending loss, providing physicians with a collective incentive to find ways to curb volume and to provide less costly care. According to this policy, the Congress sets a target national rate of increase for Medicare expenditures each year. The target includes most physician and ancillary services that are paid for by Medicare Part B and processed by carriers. Excluded from the target are charges for diagnostic X-ray, laboratory, and other services furnished in hospital outpatient departments; durable medical equipment; and services furnished by ambulatory surgical centers. The legislation requires separate target rates for surgical and non-surgical services. In establishing the target, Congress is guided by recommendations that the Secretary of Health and Human Services



and the Physician Payment Review Commission make to the Congress each spring. If actual expenditures exceed the target established for that year, a penalty is imposed on physicians by lowering the increase in their fees two years later. This is done by setting the increase in fees equal to the Medicare Economic Index (a measure of inflation in physician practice costs) plus or minus the difference between the target and actual expenditures two years previously, unless Congress enacts legislation to establish a different increase in fees for the year.

Because the VPS is a national target, individual physicians do not have strong incentives to limit the volume of their services. Congress anticipated these limitations and mandated studies to investigate setting separate standards for voluntarily formed groups of physicians by geographic area, by specialty, or by type of service. Some examples of these approaches are found in other countries. Canada and Germany, for example, have regional standards rather than national standards. Quebec specifies different expenditure limits for services of general practitioners and specialists.

The goal of this study is to provide a framework for analyzing the strengths and weaknesses of these and other choices concerning VPS policy. This framework will help the Health Care Financing Administration (HCFA) develop future VPSs that are consistent with the goal of providing physicians with stronger incentives for greater efficiency. Establishing a VPS policy requires making choices along three dimensions: the risk pool, the scope and nature of the standard, and the application of the standard. Table 1 presents an inventory of the choices along each of these dimensions. Our framework for analyzing a VPS policy is a series of questions about each choice.

- How does the choice influence the incentives to contain cost?
- What are the potential adverse consequences of the choice?
- What administrative and political problems does the choice pose?

In the next section, we outline some general answers to these VPS policy questions based on related experience in this country and experiences abroad. Sections 3 through 5 consider how choices along each dimension lead to deviations from these general principles. Because there is no direct experience with VPS in this country, our analysis is qualitative—drawing on existing literature for analogy—rather than quantitative. A table that summarizes our evaluation of choices along the dimension is included in each section; however, there remains a



**Table 1**  
**Inventory of Alternative Characteristics for VPS Policies**

---

**Risk pool**

- Geographic (nation, region, state, county)
- Delivery organization (HMO/PPO/IPA/hospital medical staff)
- Other professional membership (specialty society)

**Scope and nature of the standard**

- Scope of services in the standard
  - Services provided by group members
  - All physician services (including referrals) provided to group member patients
  - All Part B services provided to group patients
  - All Medicare-covered services provided to group patients
- Nature of the standard
  - Expenditure level vs. rate of growth
  - Global standard vs. standards by type of service
  - Adjustments for differences between risk groups in patient population
- Method of establishing the standard
  - By government
  - By formula
  - Through negotiation
  - Through competitive bidding

**Application of standard**

- Adjust future prices
  - Total payment (capitation payment)
  - Maximum payment
- 

NOTE: HMO = health maintenance organization, PPO = preferred provider organization, IPA = independent practice association.

great deal of uncertainty about how physicians would respond to each choice. The final section presents our conclusions from this review concerning the parameters of an effective VPS policy.

## 2. EFFECTS OF VOLUME PERFORMANCE STANDARDS

Volume performance standards, targets, and ceilings all provide the risk group (i.e., physicians) with a collective incentive to find ways to control volume and provide less costly care. However, collective financial incentives may have a limited effect on individual physician behavior, as was illustrated by the early experience of independent practice associations (IPAs). The association receives a fixed payment per patient; thus the group faces incentives for cost control. Individual physicians in the group, however, are paid on a fee-for-service basis; thus the individual faces incentives to supply more care. Without individual financial incentives to control cost, early IPAs were unsuccessful in containing cost (Luft, 1981). Other studies have also concluded that financial incentives tied to collective performance rather than individual performance do not alter physician behavior (Hillman et al., 1989; Moore et al., 1983).

Experience from other countries, however, suggests that global targets or ceilings may slow the growth in the volume of services provided. West Germany introduced regional expenditure targets in 1978, and volume growth slowed in the next eight years (Kirkmann-Liff, 1990). Nevertheless, the targets were consistently exceeded, and as a result, budget caps were adopted in 1986. In Quebec (which has had income ceilings for individual general practitioners and global expenditure caps for services of both general practitioners and specialists since 1977) and British Columbia (which introduced a prospective threshold for expenditures in 1985), growth in per capita utilization slowed after adopting the ceilings (Barer et al., 1988; Lomas et al., 1989). In addition, in both provinces, per capita utilization increased sharply during a temporary lapse in the ceilings (Barer et al., 1988).

This evidence of a slowdown in aggregate volume growth suggests that the controls work in the way intended, although given the analysis to date, one cannot rule out the possibility that other factors that changed over time contributed to the slowdown. Moreover, the question of how the slowdown is achieved remains unanswered. Is there a cutback in the procedures that are least likely to benefit the patient or in access to needed health care services? Gross measures of health care outcomes in countries that have adopted utilization controls compare favorably with the United States. Some analysts take this



as evidence that such controls do not lead to deleterious effects on the quality of care delivered (Kirkmann-Liff, 1990; Pfaff, 1990). In addition, many hope that VPSs will provide the collective incentive for the physician community to support development of practice guidelines that will help physicians curtail growth by reducing the use of inappropriate care (Physician Payment Review Commission [PPRC], 1989).

Although global targets and ceilings appear to have been effective in other countries, different responses might be obtained in the United States. In Germany and Canada, balance billing—charging patients for prices in excess of the fee schedule—is not allowed. Consequently, expenditure controls require controlling utilization or result in an erosion in real fees. In the United States, however, if failure to meet VPS targets holds down increases in Medicare-allowed fees, some physicians may respond by charging higher prices to Medicare patients and not by altering practice behavior. Medicare limits on balance billing<sup>1</sup> and demand responses to price place some limits on this response, although supplementary coverage dampens the demand response to increases in prices. For some patients, however, the higher prices would impede access.

Furthermore, the Medicare VPS applies only to services delivered to Medicare patients; physician expenditures by the elderly, who constitute most Medicare beneficiaries, account for only about one-third of the United States' total physician bill (Waldo et al., 1989). In contrast, the budget targets cover virtually all patients seen by physicians in Germany and Canada. Some physicians may respond to limitations on Medicare fee increases resulting from failure to meet targets by focusing their practice on younger patients covered by private payers rather than taking new Medicare patients. Others may try to shift costs by raising prices to patients covered by private payers. Again, while there are demand-side constraints on such responses, they are limited by extensive insurance coverage. Finally, some may respond to constraints on Medicare fees by treating fewer charity patients or Medicaid patients, for whom payment is lower than the Medicare payment.

In sum, VPSs may prove to be an effective mechanism for slowing the increase in Medicare volume growth. However, any VPS policy could result in adverse effects on:

---

<sup>1</sup>Congress adopted legislation that will phase in limits on charges for unassigned claims to a fixed percentage of the fee schedule amount. In 1993, when fully phased in, the charge will be limited to 115 percent of the fee schedule amount.

- access to care for beneficiaries,
- quality of care provided to beneficiaries, and
- beneficiary outlays.

In addition, the Medicare Fee Schedule and VPS policy may have a substantial impact on access, quality of care, and expenditures for physician services provided to non-Medicare patients. In the next sections, we consider how different choices about a VPS policy may strengthen or weaken the objectives of containing Medicare outlays while protecting beneficiaries.

### **3. EFFECTS OF RISK POOL CHOICES**

The current Medicare VPS policy sets a standard for the nation as a whole. Under a national VPS, the incentives for any individual physician to modify his or her behavior are weak, because the risk group is so large. To strengthen incentives, separate standards might be set for subnational geographic units, for physician group practices, or for physician groups such as professional associations. Here, we consider the effectiveness of the mechanisms for control in these different risk groups. The mechanisms include financial incentives, utilization management and control, and education about appropriate patterns of care. We also discuss potential adverse consequences and administrative barriers associated with each choice. Our analysis is summarized in Table 2 and elaborated below.

#### **GEOGRAPHIC UNITS**

##### **Mechanisms for Cost Control**

Analysts of health care systems abroad point to the importance of regionalization to provide physicians with a reasonable incentive to collaborate in controlling volume (Jonsson, 1989; Kirkmann-Liff, 1989; Rice and Bernstein, 1990). However, as we noted earlier, collective incentives alone are unlikely to alter individual behavior in large groups because the physician receives little benefit from his or her own volume control if no other physician responds, and bears no cost from failure to control if others do respond (Hadley, 1984; Newhouse, 1973). Therefore, geographic risk pools—such as states or metropolitan areas and even counties—are likely to offer only weak financial incentives to alter practice styles.

Because carriers, which collect data to measure individual physicians' performance, and Medicare Peer Review Organizations (PROs) are both primarily state-level organizations, many recommend separate VPSs for states to encourage physicians to work closely with these organizations to establish effective utilization review for services and procedures provided under Medicare Part B. These organizations also provide the foundations for physicians in smaller geographic areas to band together to work toward local expenditure targets. Geographic market areas used to adjust payments under the fee schedule (localities) represent a conceptually appealing alternative to



**Table 2**  
**Effects of Risk Pool Choices**

	Risk Pool Option		
	Geographic Area	Delivery Organization	Other Membership
Mechanisms for Cost Control	<p>Weak individual financial incentive</p> <p>Foundations exist for physician utilization review but outlier utilization review unlikely to change average behavior</p> <p>Diffuse peer pressure</p>	<p>Strength of individual incentive varies with size of group and risk/reward structure of organization</p> <p>Utilization management with stronger economic sanctions</p> <p>Degree of peer pressure depends on size of group and organization structure</p>	<p>Weak individual financial incentive</p> <p>Good organization for establishing standard but lacks data and enforcement</p> <p>Information dissemination is primary activity, but lacks data for comparative profiles</p>
Potential Adverse Consequences	<p>Variation across areas in Medicare policy</p> <p>Physician location decisions</p>	<p>Variation within area in allowed fees</p> <p>Selection of healthy patients/access for frail</p> <p>Incentives for physicians to switch groups/affiliate with multiple groups</p>	<p>Introduces specialty differentials/incentives to specialize</p> <p>Distorts RBRVS/service mix</p>
Potential Administrative/Political Issues	<p>Explicit allocation of Medicare payment to political subdivisions</p> <p>Measuring performance</p>	<p>Defining population base for standards</p> <p>Measuring performance</p> <p>Membership in multiple groups might dilute incentives imposed by single group</p>	<p>Growth for some specialties depends on others' behavior</p> <p>Measuring performance</p>

states because they are markets in which all physicians receive the same adjusted payment for Part B services. Localities are not consistently defined, however. Some states comprise a single locality. In other states, there are multiple localities made up of contiguous counties. In still other states, groups of noncontiguous counties form localities. Furthermore, localities do not accurately reflect factors that have a significant impact on cost, such as population density (Welch, 1991).

State or substate VPSs might encourage medical societies and PROs, which are based on state boundaries, to work together to influence physician behavior through utilization review. However, the effectiveness of utilization review has not been clearly demonstrated. A recent evaluation found that mandatory review for certain medical procedures provided to Medicare patients did little to reduce the rate at which medically unnecessary claims were submitted (Nyman et al., 1990). More aggressive review programs that are spreading among private carriers—such as preadmission certification, management of high-cost cases, and discharge planning—may prove more effective. Current evidence is limited and mixed (Scheffler et al., 1991), but even utilization review programs that lower the level of use do not appear to alter the subsequent rate of growth in volume of services (Gray and Field, 1989). This is particularly true for review programs—like Medicare’s—that focus on detecting and eliminating “outliers” and abuse, because removing outliers is unlikely to alter average behavior (Enthoven, 1989).

Studies of education programs designed to alter physician performance have demonstrated that such efforts work best when they provide specific information about how the individual physician’s practice patterns differ from those of peers or from accepted practice and when they provide continued feedback and enforcement (Rubin and Hackbarth, 1984). Data collected by state-level Medicare carriers provide a ready foundation for profiling a physician’s practice and providing information to the physician about how he or she differs from others in the risk group. In fact, OBRA89 requires that carriers expand and build upon their existing postpayment review to profile physicians’ billing patterns and provide comparative data to physicians whose patterns differ from their peers. In some cases, physicians are quick to change practices when informed that their practices diverge from the norm (Wennberg, 1984). In other cases, peer pressure and advice may help to turn such information into behavioral change; at a state level, however, such peer influence may be too diffuse.



In sum, because the risk pool remains large, separate VPSs for states or other geographic subunits are unlikely to provide stronger individual economic incentives for cost control than are national VPSs. However, state VPSs might encourage the physician leadership to work with existing state-level organizations to more closely review and monitor practice patterns to achieve the local targets. Stronger sanctions or pressures on physicians who deviate from standards might be required for this to translate into effective control of volume growth.

### **Potential Adverse Consequences**

One objective of setting geographic VPSs is to encourage the physician community to work with carriers and review organizations to develop strategies to contain growth and meet the set target. For the community to be effective, it must have some liberty to adopt policies that will achieve the objective. However, absent standardized policies and restrictions placed on carriers and PROs by Medicare, variations between regions and states in policies affecting Medicare beneficiaries and providers may arise (Hammons et al., 1986; Burney et al., 1984). Such variation in the implementation of a federal program will undoubtedly raise issues of inequity.

Setting geographic VPSs will establish borders across which standards may vary. These differences in standards will also raise equity issues and in addition may encourage physicians to relocate across borders to areas with less stringent targets. Using payment localities as geographic units introduces variation in the standard in some states but not in others. However, the payment system assumes that physicians in the same locality face similar economic conditions with regard to cost of living, office expenses, and malpractice costs. Because physician practice patterns and their response to VPSs may be related to market-specific conditions, state-level VPSs could distort incentives across markets.

### **Potential Administrative/Political Issues**

Varying VPSs by geographic area will involve an explicit allocation of Medicare payments to states or other political subdivisions. Decisions about the equitable distribution of the federal Medicare monies to geographic subareas would likely be a politically contentious process (PPRC, 1990).

Data concerns present some technical problems in setting standards and measuring performance. Even state-level data show large year-

to-year variability in expenditures. The magnitude of these variations over time is likely to be even greater for geographic units below the state level. This seems to preclude using a few historical years of data for setting state-level targets (PPRC, 1990). Some of the variability, however, may be due to processing lags and errors that will improve with new reporting requirements. Large year-to-year changes in expenditures also suggest that the full differences between a target and actual measured performance for a year should not be incorporated in determining fee updates (PPRC, 1990).

## **DELIVERY ORGANIZATIONS**

### **Mechanisms for Cost Control**

An organized group of physicians, such as a multispecialty group, a preferred provider organization (PPO), an IPA, and similar organizations, can translate a collective financial incentive into incentives for the individual physician depending on the structure of the risk-and-reward system the organization develops and the size of the physician group. For example, many IPAs that developed in the 1980s placed small groups of physicians at some financial risk if costs exceeded budget. Welch (1987) provides evidence that IPAs forming small risk pools were more successful in containing costs than IPAs in which all IPA members shared in the risk. Organized physician groups can also translate collective incentives into individual incentives by imposing penalties or rewards that vary with individual performance. Such arrangements have been shown to alter performance (Hillman et al., 1989).

Utilization management and education directed at altering performance may also be stronger in organized physician groups than in geographic area-based risk pools. The former group may be in a position to impose stronger economic sanctions—notably denial of group membership. Case studies have suggested that personalized review programs that depend heavily on peer pressure, information dissemination, and connections within the practitioners' community can alter physician practice (Rolph, 1990).

### **Potential Adverse Consequences**

Setting VPSs for multiple delivery organizations or group practices in an area and using performance relative to the VPS to guide updates in prices for each group practice could lead to variation between group practices within a market area in conversion factors and hence in prices for care. One objective of payment reform was to simplify



Medicare physician payment. However, numerous group conversion factors would again produce a payment system that was administratively complex and difficult for beneficiaries and physicians to understand. This occurrence might erode beneficiary and physician confidence in physician payment reform and could lead to greater volatility in beneficiary out-of-pocket liabilities.

Oddly, holding down updates for group practices that fail to control volume growth may encourage Medicare beneficiaries to switch to the less efficient performers, because with lower fees, the beneficiaries' cost-sharing is also reduced. Of course, this assumes that physicians' decisions to accept assignment are not affected by lower fees and that Medicare beneficiaries are responsive to price differences. In addition, the variation in allowed fees for the same procedure resulting from separate VPSs for delivery organizations is unlikely to reflect variation in resource costs as intended by the legislation.<sup>1</sup>

Incentives to select healthier patients may exacerbate any access effects of VPS for the less healthy patients and/or affect referral patterns. Since there is question over the ability to adjust average utilization rates to account fully for any differences in the expected utilization of a subgroup of beneficiaries (Newhouse, 1986), the group practice would have an incentive to treat the healthiest patients in order to improve the chances of meeting the group performance standard. To the extent that the group is able to identify less healthy patients in advance of treatment, it would have an incentive to refer them elsewhere for care. But the residual market would also be reluctant to take on the unhealthy patients. Accepting the patient would compromise the ability of the residual market to achieve performance within target, if its target is based on the average patient. Thus, access for the neediest patients could be threatened. To address this problem, Congress might need to enact antidumping or antidiscrimination statutes to protect beneficiaries. If performance measures were based only on the services delivered by the group practice to their patients and not on all services received by their patients, the group practice would have an incentive to refer complex cases to another group of physicians when they identified health problems that could not be detected in advance of accepting the patient.

---

<sup>1</sup>The PPRC recommends that improving incentives for physician groups to participate in capitation programs is superior to "carving out" VPSs for physician subgroups (PPRC, 1990).



Physician membership in multiple groups and switching between group practices are further potential problems. If group practice members are paid on a fee-for-service basis, physicians would have a financial incentive to seek and join group practices that receive full fee updates because they have a high portion of healthy patients, and to leave group practices that had difficulty meeting their standard and receive discounted fee updates.<sup>2</sup> The amount of physician movement between group practices could lead to confusion for beneficiaries because of frequent changes in the physician's allowed charges or decision to accept assignment.

### **Potential Administrative/Political Issues**

Defining a population base on which to set standards and measure performance poses difficulties in establishing separate VPSs for delivery organizations (PPRC, 1990). For example, some believe that hospital medical staffs present an ideal risk group because they have an established utilization program and other internal incentives to control cost (Welch, 1989).<sup>3</sup> However, there is no defined population base on which to set expenditure targets.

Similarly, if beneficiaries are to retain point-of-service free choice in selecting their care provider, there are no easy ways to determine beneficiary membership in a group practice. For example, beneficiaries could be asked to report their usual source of care or where they would be most likely to go if they needed care as one way of determining membership. However, intentions and actual behavior are likely to disagree. In a study of PPOs, almost one-third of employees who indicated they would use a PPO physician received most of their care in the subsequent year from non-PPO physicians. Similarly, almost one-third of employees who named a non-PPO provider as their source of care actually turned to a PPO provider in the following year (Hosek, Marquis, and Wells, 1990).<sup>4</sup> Establishing separate targets for

---

<sup>2</sup>However, with fee-for-service payments, the incentive to select healthy patients to meet one volume target and receive larger price increases may be diminished by the incentive to increase income by treating sicker patients requiring a greater volume of services. The relative strength of these factors will depend in part on the physician's stake in the standard.

<sup>3</sup>Welch proposes using the medical staff as a risk pool to receive per-case payment based on Diagnosis-Related Groups (DRGs) for inpatient physician expenses, not for all Part B expenditures.

<sup>4</sup>Although targets and performance could be restricted to the services actually provided to patients, excluding services provided outside of the group practice in measuring performance presents the group with poor financial incentives, as we discuss in the next section.

alternative health plans—such as HMOs—that require explicit beneficiary enrollment in the group practice and do not pay benefits for out-of-plan use does not present this problem.

Administrative problems also arise if physicians are allowed to belong to more than one group practice. Incentives for cost control that exist within a single group practice might be diluted by multiple group membership. Physicians might refer complex cases to the group practice with higher targets. Establishing the population base for a single group practice and tracking group performance are further complicated when physicians belong to multiple group practices.

## **OTHER PROFESSIONAL MEMBERSHIP**

### **Mechanisms for Cost Control**

Professional societies play a primary role in continuing education for physicians. They are increasingly active in developing guidelines on appropriate service utilization and the safety and efficacy of procedures (Schwartz, 1984). Because many specialty societies have state organizations, establishing separate VPSs for society members in a geographic area (such as specialty societies within a state or a county medical society) might encourage greater cooperation among members with the Medicare carriers and PROs to meet the targets, although the societies themselves lack the data to develop profiles and the formal sanction for an effective utilization review program.

### **Potential Adverse Consequences**

VPSs for specialty societies might reintroduce a number of distortions in the payment system that the reform legislation was intended to correct. First, if payment updates differed among specialty groups depending on the target/performance comparison, specialty differentials in payment would result for a given procedure.<sup>5</sup> If differences persist over time, they could affect specialization choices. Second, different payment updates would result in relative payments for procedures performed by different specialties that could differ substantially from the relative resource cost. Third, primary care providers might increase their referrals of costly cases to specialists, though whether this increase would affect Medicare outlays and the quality of care delivered is uncertain.

---

<sup>5</sup>This assumes a global payment update for all care that varies among specialty groups. We consider different updates for different groups of procedure in the next section.



### **Potential Administrative/Political Issues**

The services provided by some specialty groups are in large part determined by the referral and prescribing practices of other specialties. For example, most of the services of radiologists are the consequence of referrals from other physicians. Thus, both optimum financial incentives and equity would suggest that other physicians share in the growth of the volume of radiologists' services. Establishing separate VPSs would break this link.

## **4. SCOPE AND NATURE OF THE STANDARD**

The second major dimension in defining a standard involves the scope of services for which physicians should be placed at risk, the nature of the standard itself, and the method of establishing the standard. This section presents a separate discussion of each of these issues.

### **SCOPE OF SERVICES IN THE STANDARD**

The most basic issue regarding the scope of services that would arise with subnational risk groups is whether physician groups should be placed at risk for only those services they provide to their patients or whether groups should be responsible for all services provided to their patients, including those provided by physicians outside the group. Another important issue is which services to include in the standard. Under current policy, the standard applies to physicians' services and other services typically provided in physicians' offices, such as laboratory testing. The standard, however, could be broadened to include all Part B services or all Medicare-covered services (Part A and Part B). The choices regarding these issues are discussed below and summarized in Table 3. For simplicity of presentation, we have excluded the effects of standards based on all physician services and on all Medicare-covered services when physicians are at risk only for services provided by their VPS risk group.

#### **All Part B Services Provided by Group Members Only**

The weakest incentives for cost control will occur if physicians are placed at risk for only the services provided within the VPS risk group. Under this arrangement, the risk group will have some incentive to monitor physician utilization. The risk group may not impose strong economic pressures on its peers, however, because patients with high utilization can be referred outside the group. The amount of peer pressure will depend greatly on how easy it is to refer high-use patients out of the group. For risk groups defined geographically, referral across boundaries will be limited if the geographic area is large, such as a metropolitan area or a state. Under a highly competitive model, referral of high-use patients is likely to be difficult. Therefore, the size of the physician group and the number of competing groups



**Table 3**

**Effects of the Scope of Services Included in the Standard**

		Options for Defining Included Services		
	All Part B Services Provided by Group Members Only	All Physician Services Provided to Patients of Group Members	All Part B Services Provided to Patients of Group Members	All Medicare-Covered Services Provided to Patients of Group Members
Incentives for Cost Control	Depends on ability to shift sickest patients to other groups (e.g., to other delivery organizations, across boundaries)	Individual incentives depend on group size and organizational structure	Greater flexibility in controlling cost by modifying volume of nonphysician services	Greater flexibility in controlling cost by modifying volume of nonphysician services  Strong incentive for provision of care in ambulatory setting  Incentive to accept capitation
Potential Adverse Consequences	Incentive to refer sickest patients to nonmember providers  Incentive for physicians to switch groups and/or affiliate with multiple groups	Distorts RBRVS and service mix due to incentives to use tests and other nonphysician services  Incentive for physicians to switch groups and/or affiliate with multiple groups	Incentive for physicians to switch groups and/or affiliate with multiple groups	Incentive for physicians to switch groups and/or affiliate with multiple groups
Potential Administrative/Political Issues	Lack of group-specific data for establishing standards  Additional administrative burden of tracking group-specific performance	Lack of group-specific data for establishing standards  Additional administrative burden of tracking group-specific performance  Payment procedures for out-of-group use	Lack of group-specific data for establishing standards  Additional administrative burden of tracking group-specific performance  Payment procedures for out-of-group use	Lack of group-specific data for establishing standards  Additional administrative burden of tracking group-specific performance  Lack of timely Part A and Part B linked data  Payment procedures for out-of-group use

will influence the amount of peer pressure. The existence of a “safety valve” regarding high-use patients will most likely keep peer pressure to a minimum.

Physician membership in multiple risk groups and switching among groups—for example, belonging to more than one delivery organization, having practice locations in more than one geographic subdivision—might dilute incentives for cost control, as discussed earlier. Physicians would have an incentive to leave risk groups with low targets and to shift patients among groups according to their health risk, rather than to find ways to contain cost. The ability to do so, however, may diminish as the scope of services included in the group target increases, as discussed below.

Finally, each option discussed in this section faces two major administrative limitations. First, the reliability of data for establishing group-specific standards is questionable, even for statewide standards. Therefore, one option would be for physician risk groups to start with a national standard until sufficient data can be collected to calculate group-specific standards. Second, the administrative burden of tracking physician membership and services provided to beneficiaries within each group could be substantial—especially for group practices. This burden is likely to increase as the scope of services included in the group target broadens, as discussed below.

### **All Physician Services Provided to Patients of Group Members**

The decision to place physicians at risk for all services provided to their patients could have a major effect on the incentives faced by physicians within the risk group. The strength of these incentives increases as the scope of included services becomes more comprehensive. For example, limiting the scope of services to physician services would provide some incentive to overutilize nonphysician services.

The adverse effects discussed above of multiple group membership and physician shifting among groups would still occur. However, because of greater incentives to monitor physician behavior and utilization, physicians might find it more difficult to change risk groups. At the very least, they might have to provide information about their practice profile before joining a new group. In general, the options that place groups at risk for all services provided to the patient would seem to create a more stable environment for group formation and membership.

Including out-of-group use in the group performance measure, however, poses administrative burdens. All physician services delivered



to a patient need to be attributed to one group, even if these services are performed by a physician belonging to a different group—including groups reporting to a different carrier. This problem could be overcome if beneficiaries were required to enroll in a single group and to agree to receive all care from that group. Out-of-group use would not be covered under Medicare in this case.

Another important administrative and policy issue that would need to be resolved is how the physician group would be compensated for the services it delivered to patients of another group. For example, if a family practice group refers a patient to a radiology group for treatment, what payment methods would be allowed? One obvious option is to allow the radiology group to bill according to the fee schedule and its conversion factor. Another option would be to require relative prices to be based on the RBRVS but to permit a negotiated conversion factor between the two groups. A related question is whom the radiology group should bill: the family practice group or the Medicare carrier. If the radiology group must use a conversion factor determined by HCFA, it should bill the carrier. If negotiated conversion factors were permitted, however, the family practice group might be paid by the carrier based on its own conversion factor, and the group would then pay the radiology group based on its negotiated factor.

### **All Part B Services Provided to Patients of Group Members**

The primary difference between this option and the previous one is that the broader scope of services included in the standard eliminates the incentive to overutilize nonphysician services. Because the scope of services is more comprehensive—including, for example, hospital outpatient services and services furnished by ambulatory surgical centers as well as physician care—the incentives to monitor and to influence physician utilization are even stronger. Physician mobility between groups might be reduced even further by this greater incentive to profile physician practices.

### **All Medicare-Covered Services Provided to Patients of Group**

This option represents the most comprehensive scope of services for defining the standard, namely, all Medicare Part B services and Part A services combined. It provides by far the strongest incentives for the physician group to monitor member practice patterns and to manage patient care in every setting. Including Part A services in the target provides an incentive to shift inpatient care to the less costly ambulatory setting. It might also provide a strong incentive for

groups to accept capitated payments instead of fee-for-service. Capitated payments would tend to be profitable (at least in short-term cash flow), though more risky than fee-for-service payments. Because groups under this option have a strong incentive to manage each beneficiary's entire episode of care, they also have an incentive to accept payment in advance (i.e., capitated payment) rather than payment at the point of service.

This option would also introduce standards for total expenditures under the Medicare prospective payment system (PPS). To date, expenditure limits under PPS are per case payments, not total payments. This option would introduce a single standard for total Medicare expenditures and thus create a less fragmented system of payment.

Payment for providers outside of the group would be a very important issue, as discussed above. For example, if groups were allowed to contract with Part A providers, they could bill the Medicare program to receive the allowed payment for a covered service (e.g., the DRG payment for an episode of inpatient care), then pay the Part A provider a negotiated fee. Even if groups were not allowed to negotiate fees with Part A providers, they would have a very strong incentive to monitor their patients' care.

This option would require a data system that linked Part A and Part B records for beneficiaries in a timely manner, such as the Common Working File (CWF) that is currently being implemented. Because the CWF is new, however, accurate data from previous periods are not necessarily available.

Adding Part A utilization to the standard for groups would substantially increase the groups' financial risks. Therefore, beneficiary access to all Medicare-covered service would need to be monitored closely.

## **NATURE OF THE STANDARD**

Establishing the standard requires making choices about whether to establish a target rate of growth or a target level of service, whether to set one standard for all services or to set standards that vary by type of service, and how to adjust a target for differences between risk groups in the patient population served. Issues involved in making these choices are summarized in Table 4 and discussed below.



**Table 4**  
**Effects of Choices About the Nature of the Standard**

		Nature of the Standard	
Expenditure Level vs. Rate of Growth		Global Standard vs. By Type of Service	Risk Adjusters
Incentives for Cost Control	Level can focus areas of overservice	By type can focus on problems of excess use and respond to physician behavioral change Global makes physicians responsible for services they prescribe but don't perform	AAPCC adjusters may distort incentives in small groups Some additional adjusters may weaken incentives for all groups
Potential Adverse Consequences	Rate can perpetuate and exacerbate inequities	By type, payment difference does not reflect difference in resource cost By type may distort referral patterns	Depends on risk group; AAPCC adjusters may lead to selection and access problems
Potential Administrative/Political Issues	Level makes explicit redistribution Data reliability	Increased complexity in setting multiple standards Establishing appropriate growth of different services	Good adjusters not available in current databases

AAPCC = adjusted average per capita cost.

## Expenditure Level vs. Rate of Growth

A target *rate of growth* can be established based on estimates of inflation and population growth and an assessment of the appropriate growth in the volume of services per person to account for changes in technology and other factors. Or, a target can establish the *level* of total resources (expenditures) that are to be devoted to medical care.

While these choices are essentially equivalent for a national target, with subnational risk groups the type of standard does alter the policy aims that can be addressed with the target (PPRC, 1988). To direct cost containment incentives to areas that exhibit high-cost patterns of care and reward areas that are more cost-efficient requires explicit consideration of the target level of expenditure in each area.<sup>1</sup> In addition, establishing target levels of expenditure for each subnational risk group can provide incentives to increase care in areas of underservice. Growth targets, however, would perpetuate the relative difference in use between under- and overserved areas and exacerbate the absolute differences.

While expenditure-level targets offer some greater flexibility in meeting policy objectives, they pose some political and administrative difficulties. First, as we noted earlier, explicit allocation of federal expenditures under Medicare to subnational areas is likely to be a politically difficult process. Explicit *redistribution* of monies may well make the process even more contentious.

Second, there are some problems associated with the reliability of the data for setting target levels. We stated earlier that, even at the state level, there are large year-to-year variations in expenditures. At the smaller unit of a county, these large variations remain even when averaging the data over several years (PPRC, 1988). This variability within an area makes it difficult to use historical data to set the level. Historical data are not strictly needed to establish area targets. For example, a national target level could be allocated to subnational areas based on the size and composition of the area's Medicare population, although some adjustment for border crossing may be necessary. However, targets that are set too low relative to current practice patterns could impede access to care for Medicare beneficiaries in the area. Thus, some blending of the adjusted national target and the area historical data might be needed for some time, which would require the area data.

---

<sup>1</sup>The literature has firmly established that there is substantial variation between areas in the way medicine is practiced (see, for example, Wennberg, 1984).



## Global Standard vs. Different Standards by Type of Service

A global standard would be a target increase or expenditure level that covers all services. Alternatively, different targets can be set for different types of service. For example, OBRA89 requires separate standards for surgical and nonsurgical services. In West Germany, separate expenditure caps are established for physician consultations, laboratory tests, and other services. Separate standards might be set as a function of place of service to encourage the provision of care in less costly settings, for example, inpatient vs. outpatient targets.

Setting separate standards for different types of service allows policymakers to focus controls on services that have exhibited rapid volume increases and provides another policy mechanism for stimulating desired provider behavior and responding quickly to undesired changes (Kirkmann-Liff, 1990). Furthermore, separate standards may encourage physicians to organize through their existing specialty societies. For example, separate standards may provide the societies with greater incentives to establish practice guidelines and disseminate information about appropriate practice.

However, physicians prescribe many services that they don't perform but for which they refer patients to other physicians. Radiology services is an illustration that we mentioned earlier. A global standard makes physicians responsible for increases in all the services they perform and prescribe.

Another disadvantage of setting separate standards for different types of service is that it may lead to payment differences among types of service that do not reflect differences in the resource costs of providing them because the conversion factors will diverge over time. Having separate standards might also provide distorted incentives for the mix of services and referral patterns. For example, if the standard for laboratory tests was higher than the standard for evaluation and management services, general practitioners might refer patients for more tests when making a diagnosis rather than take an extended history and physical.

Setting different standards for different types of service would increase the administrative complexity of the system, especially if risk groups are subnational. It also would require decisions about what mix of different type of services is appropriate or how the rate of growth should differ among classes of service—information we do not have.

## Risk Adjusters

One way to set a target for a subnational risk group is to allocate a target level of national expenditure to the group based on the size and risk composition of the patient population it serves. The issue then is what variables or adjusters to use to define differences in the risk composition of the group.

The formula Medicare now uses to adjust for differential risk of treatment when setting payment for capitated health plans, the adjusted average per capita cost (AAPCC), includes age, sex, welfare status, and institutional status. There is wide agreement that these variables do not adequately adjust for case-mix differences because they poorly predict expenditures for individual beneficiaries (Newhouse, 1986). As a result, there is an incentive for capitated plans to enroll the healthier Medicare beneficiaries. Incentives to select healthy patients, rather than to change behavior, could be a problem in using the AAPCC risk adjusters to set separate standards for different delivery organization risk groups in a geographic area. As we noted earlier, if delivery organizations are able to select healthy patients, then the unhealthy patients must obtain care from the residual risk pool. But with inadequate adjusters, the target for the residual pool will be too low, with possible adverse consequences in terms of access or quality of care delivered to those particularly in need of medical care.

Because targets for geographic areas cover the entire population of the area, selection is less of a problem and the AAPCC risk adjusters, combined with price adjusters, may be adequate for setting geographic targets, especially for large geographic areas such as states. In fact, for setting geographic targets, the current demographic adjusters may be superior to the alternatives. Most of the alternatives that are possible with current data systems include prior utilization in the adjustment formula (Anderson et al., 1990). As a consequence, there is some incentive to deliver more care to patients in order to affect the risk adjustment for the group in the subsequent periods.

Rather than using utilization as a proxy for health status, others have examined ways of directly incorporating health status as an adjuster, including measuring functional status (Lubitz, Beebe, and Riley, 1985; Thomas and Lichtenstein, 1986) or the existence of certain chronic conditions. These measures are not part of the current data collection of the Medicare program, however.



## ESTABLISHING THE STANDARD

There are several ways that the standard can be established, including:

- by the federal government,
- by formula,
- through negotiation, and
- through competitive bidding.

OBRA89 specifies that the Medicare VPS will be established each year by Congress, with a default formula specified to apply if Congress does not approve a specific target. The Secretary of Health and Human Services (HHS) and the PPRC are called upon to make recommendations to the Congress about the VPS. The recommended growth standard is to take into consideration changes in:

- prices,
- the composition of the Medicare population,
- technology, and
- medical needs due to changes in the prevalence of certain conditions.

In addition, recommendations are to take into account access to appropriate care and inappropriate use of services (PPRC, 1990).

The first two changes to be accounted for in the target—prices and population size and mix—can be readily measured. Technological growth, the amount of technological improvements to pay for, and changing medical needs of the population are difficult to measure directly and thus are often based on “informed judgment.” Thus, a strict formula-only approach to setting standards is unlikely to work in the long run. Furthermore, OBRA89 did not intend for VPSs to be set by formula; the formula provides the Secretary of HHS with a standard to implement should the Congress fail to act in any given year.

The role of interested parties outside of government in setting the standard under the OBRA89 legislation will be informal—offering advice and comment on the recommendations of the Secretary and PPRC. Some, however, believe that physicians need to be full participants in the process if they are to cooperate in meeting the reform objectives, and they recommend formal negotiations involving physi-

cian groups, as is practiced in some other countries (Glaser, 1989). For example, in Germany, the expenditure cap is determined through negotiations between a national association of payers and physicians (see Kirkmann-Liff, 1990, or PPRC, 1991, for a detailed discussion of the German system). The negotiations are guided, but not bound, by recommendations from a government advisory body that includes representatives from insurers, physicians, hospitals, employers, and unions. Failure to reach negotiated agreements can result in compulsory arbitration. In Canada, targets and ceilings are established through negotiations between the provincial governments and physician associations. In some provinces, the parties agree to binding arbitration for disputes; in others, there is no mechanism to resolve disputes (see Lomas et al., 1989, for a discussion of the Canadian systems). In British Columbia, which does not have an agreement for binding arbitration, failure to reach an agreement recently ended in a ceiling.

Critics of establishing formal negotiations to set targets and/or fee schedules in the United States note problems of involving interested parties other than physicians—such as consumers and private payers—in a formal process, as well as the limited role for Medicare to negotiate because Congress sets budgets, and decentralization of political power in the United States (Ginsburg and Lee, 1989; Hsiao, 1989; Rodwin, 1989). They also observe that there is little evidence that formal negotiations in other countries reduces conflict between the medical profession and the state and that informal working relationships between payers and physicians have led to innovative and cooperative efforts at cost containment in this country—such as the establishment of PPOs.

Competitive bidding might also be used to establish volume standards if the standard was a maximum under which the group bears the full risk for volume per patient above the maximum and bears some or all of the reward from delivering care less than the maximum. Examples of the use of competitive bidding to purchase health care include: the purchase of home health care in a demonstration of the cost-effectiveness of managed, community-based long-term care; the purchase of mental health care in Massachusetts; and the purchase of capitated contracts for indigent medical care in Arizona (McCombs and Christianson, 1987). One winning bidder in an area could be selected. This would operate like geographic capitation described by Burney et al. (1984) and the Congressional Budget Office (1986). A disadvantage of selecting a single bid is that it might discourage competition in subsequent bidding rounds.



If multiple bidders are selected, the winning (low) bidders might be treated as preferred providers with the losing bidders forming a residual market that is reimbursed at a lower rate than the winning bids. This would preserve beneficiary freedom of choice and provide flexibility in the event that not enough bidders with acceptable bids come forward. Beneficiaries could be offered incentives to enroll with the preferred provider group. To safeguard against collusion in the bidding process, the preferred providers might be limited to the number and mix of providers necessary to ensure access. Limits on balance billing by physicians outside the preferred provider pool might be necessary to preserve beneficiary choice while protecting against burdensome beneficiary out-of-pocket liability.

In practice, competitive bidding has not conclusively been a more effective cost-containment device than traditional ways of setting prices or capitation rates (McCombs and Christianson, 1987). Furthermore, the bidding process adds to the cost and complexity of administering the program.



## 5. APPLICATIONS OF THE STANDARD

Implementing the standard involves making choices about whether to use it to adjust future updates to prices (i.e., through updates to the conversion factor), to determine total per capita payments, or to establish payment ceilings. This section discusses the consequences of each of these applications. The most important effects of each application are summarized in Table 5.

### ADJUSTING FUTURE PRICES

The current Medicare volume performance standards are used to adjust future prices. This approach provides the weakest economic incentive to control overutilization because of the rather lengthy time lag before economic sanctions are applied and because all services are affected uniformly. To focus cost containment on overused services, different targets (and price updates) for different service groups can be established. However, if separate standards are developed according to type of service, then these multiple updates may quickly lead to divergent fee schedules. The trade-off is between specificity in targeting overutilized services and uniformity in the fee schedule.

One adverse effect is that physicians may reduce their assignment rates in response to lower payments in the future, thus increasing the financial liability of beneficiaries.<sup>1</sup> Another is the need to review the appropriateness of actual utilization patterns. Adjusting all future prices by a uniform factor provides no direct incentive to discard unnecessary services or to encourage the use of highly beneficial services. In addition, Medicare expenditures will continue to be difficult to predict because the adjustment to future prices does not limit total expenditures; it merely establishes a target when combined with volume projections. Physicians may also respond to limits on their Medicare fee updates by trying to shift costs and by raising the prices they charge private payers. Others may react by treating fewer charity cases or Medicaid patients, for whom they receive even lower fees than are paid by Medicare.

An important administrative task will be distinguishing between “real” changes in service mix and “upcoding.” Evidence from PPS

---

<sup>1</sup>To protect beneficiaries from undue burden, however, Congress has limited the amount physicians can charge for unassigned claims.

**Table 5**  
**Effects of How the Standard Is Applied**

	Options for Applying the Standard		
	Adjusting Future Prices	Determining Total Per Capita Payments	Establishing Total Payment Ceilings
Incentives for Cost Control	<p>Weakest incentive because of time lag between overutilization and economic sanction</p> <p>Single update for all services dilutes incentive to reduce increased utilization of specific services</p>	<p>Depends on distribution of payment to group members</p>	<p>Depends on how group shares in savings from delivering a volume less than ceiling</p> <p>Depends on how payments are distributed to group members</p>
Potential Adverse Consequences	<p>Low updates may lead to reduced assignment rates and thus greater beneficiary liability</p> <p>Medicare expenditures will still be somewhat unpredictable</p>	<p>Lower assignment rate among physicians; increase in beneficiary liability</p> <p>Poor access and low quality</p>	<p>Lack of adequate care for beneficiaries at the end of fiscal year if ceiling is exceeded</p> <p>Lower assignment rates among physicians</p> <p>Potential distortion in service mix if ceilings set for individual physicians</p> <p>Large potential beneficiary liability after ceilings are exceeded unless balance billing is restricted or prohibited</p>
Potential Administrative/Political Issues	<p>Need to distinguish between "real" changes in service mix and "upcoding"</p>	<p>Lack of data about utilization by patients under capitated payment, unless providers are required to submit utilization data</p>	<p>Need to monitor program expenditures and/or payments to individual physicians to determine when ceiling has been exceeded</p> <p>Likely to create an annual year-end crisis after ceilings are exceeded</p>



(Carter, Newhouse, and Relles, 1990) suggests that a significant amount of the annual increase in expenditures for hospital care is related to coding patients into higher payment categories, i.e., upcoding. Both HCFA and the Prospective Payment Assessment Commission (ProPAC) develop annual estimates of changes in hospital case-mix due to real changes in the underlying mix of patients. These estimates are included in proposals for the annual update for PPS payments. Changes due to upcoding are excluded, since hospitals have already received higher payments for these cases. Under a system of volume performance standards, there will clearly be a need for separating upcoding from real changes in service mix. Specifically, the technology and practice pattern component of the standard should account for volume changes related to appropriate changes in medical practice and technology. Otherwise, physicians will be penalized in the future for increasing their use of these new services.

## **DETERMINING TOTAL PER CAPITA PAYMENTS**

Under this option, the standard would be calculated as a per capita amount and would include an estimate of an appropriate increase in per capita expenditures. This option provides strong group incentives to control costs and makes future Medicare outlays completely predictable. Evidence shows that HMOs, which receive per capita payments, do deliver less costly care than fee-for-service (Luft, 1981; Manning et al., 1984). However, there is little evidence that HMOs alter the *rate of growth* in utilization.

Incentives for the individual group member depend on how the group distributes the total payment to members. If physicians are paid in proportion to services they provide, there is little incentive to control volume, and the amount of the per capita payment would affect fees received for each billable service. If fees are low as a result, this may affect physicians' decisions to accept assignment and so would affect beneficiary liability. There may also be adverse consequences for access and quality if capitation results in low fees because volume is not constrained. Furthermore, it may be difficult for Medicare to monitor access and quality if, as is the case under current capitation arrangements, groups are not required to submit utilization data.

## **ESTABLISHING PAYMENT CEILINGS**

A payment ceiling establishes an absolute limit on total payments. The incentive to control utilization, therefore, depends on how the group is paid. At one extreme, if physicians are paid on a fee-for-ser-



vice basis with no reward for reducing volume, there is little incentive to control utilization. In fact, individual physicians have an incentive to increase their volume of services unless individual performance is monitored or payments are prorated, as in Germany. At the other extreme, if physicians are paid a risk-adjusted per capita amount, the incentive to control utilization is strong.

Payment ceilings could have several adverse effects on beneficiaries. If the budget is exceeded before the end of the year, for example, beneficiaries might be denied access to essential services. Physicians might lower their assignment rates, exposing beneficiaries to greater out-of-pocket expenses, unless balance billing was further restricted or prohibited. Furthermore, beneficiaries could face an annual, year-end crisis atmosphere that could erode confidence in Medicare.

Physician practice patterns could be dramatically affected by individual or organizational payment ceilings. Individual payment ceilings would, in effect, place physicians on salary, and, therefore, are difficult to consider as a feasible option. Organizational or group payment ceilings would provide incentives for physicians to determine methods for allocating a fixed amount of money.

Finally, this option would require accurate, timely monitoring of program expenditures to determine whether ceilings were exceeded, and if so, by how much. Of course, under a system of prorated payments such as Germany's, payments could be established low enough to guarantee that the ceilings were not exceeded. These lower payments could reduce physicians' supply of services to Medicare patients, however.

## 6. SYNTHESIS AND CONCLUSIONS

Our analytic framework presented three major dimensions of volume performance standards:

- the choice of a risk pool;
- the scope and nature of the standard; and
- the application of the standard.

From our review, we conclude that VPSs are likely to be most effective in controlling expenditures and changing physician behavior if they are defined using:

- states;
- all Medicare Part B services, possibly expanded to include Part A services; and
- per capita utilization targets.

Establishing separate standards for voluntarily formed groups of physicians, called “carve-out” groups, poses substantial administrative challenges and potential adverse outcomes. Instead of carve-out groups for VPS, HCFA should continue to encourage beneficiary participation in prepaid plans because capitated payment systems have been effective in lowering health care use.

### CHOICE OF RISK POOL

There is little empirical evidence to suggest that volume performance standards alone will influence individual physicians to alter practices. Therefore, we conclude that VPSs will be most effective if established for groups with an identifiable leadership and some mechanism for monitoring and controlling the behavior of individual members.

States have been proposed as an appropriate unit (Rice and Bernstein, 1990; PPRC, 1990) because of the effectiveness of geographically based VPSs in other countries, the potential for greater use of carrier data by state medical societies, and the potential for improving the equity of per capita expenditures for Part B services across states. State-level VPSs provide potential for coordinating the efforts of carriers, PROs, and medical societies, since these organizations are already based primarily on state boundaries. Although



market-level VPSs could also be implemented and administered with the cooperation of these organizations at the state level, they would require additional coordination between states for markets that cross state boundaries. We conclude that state-level VPSs provide the most feasible method of providing targeted incentives to physicians and for encouraging the organizational cooperation needed to monitor and modify physician behavior.

Group-specific VPSs (i.e., carve-out groups) present enormous administrative challenges and may provide incentives for strategic patient selection. An important limitation of group-specific VPSs is that physicians have an incentive to withhold necessary services or to refer their patients to other physicians outside their group unless physicians are at risk for all services provided to their patients. Group-specific VPSs, therefore, appear to be feasible only if: (1) group membership is determined based on beneficiary enrollment, to encourage physicians to provide continuity of care; and (2) all Part B services provided to members are included when measuring the group's performance, to discourage strategic referrals and to place physicians at risk for total patient care. However, managed-care delivery organizations, such as staff-model HMOs, that are responsible for all Part B services provided to an enrolled beneficiary population are an ideal mechanism for monitoring and influencing physician behavior. Because capitated payments provide a strong economic incentive to control expenditures, HCFA should continue to explore methods for encouraging beneficiaries to enroll in managed care organizations. Research should also continue on incentives to encourage physicians to accept capitated payments under Medicare as an alternative to VPSs.

## **SCOPE AND NATURE OF THE STANDARD**

The scope and nature of subnational VPSs involve answers to the following questions:

- What scope of services should be included?
- What type of target should be established?
- What type of service should be included?

### **Scope of Services**

Current policy includes physician services and other services commonly performed in a physician's office in the standard. Expanding



the scope of services to include all Part B services would make physicians responsible for controlling other services that they prescribe and would also provide them more flexibility in adjusting their practice patterns to achieve the target.

An alternative method of determining what services to include in VPSs is to include all Medicare Part A and Part B services. This method would apply a single VPS to Part A as well as Part B services and would thus provide an incentive to control *total* rather than *per unit* increases in Part A expenditures. This alternative requires improved data systems and so is not one that could be immediately implemented. After some experience with the success of the new physician policy, Congress may wish to consider the advisability and desirability of expanding the VPS to include Part A services.

Another related, but distinct, issue that must be addressed is whether membership in a group should be determined by the physician or by the beneficiary. OBRA89 requires a study of the concept of allowing physicians to form voluntary groups for purposes of establishing group-specific VPSs. Based on our discussion above, we conclude that physicians should not be allowed to form voluntary carve-out groups *unless* they enroll beneficiaries in an organization that will be accountable for all Part B services provided to those beneficiaries.

The issue of how to determine group membership leads to different conclusions if VPSs are based on states. Should state-level VPSs be based on all Part B services provided in that state, or all Part B services provided to beneficiaries who are residents of that state? To avoid distorting referral and treatment patterns, one should assign beneficiaries to a single group. This would argue for the latter basis. However, across-state referrals may pose a relatively small problem, and carrier data for monitoring performance refer to services provided by physicians in a state rather than to care received by beneficiaries residing in the state. Moreover, because physician membership in a state-level VPS is not voluntary, it may be politically difficult to hold physicians accountable for Part B services provided to their residents in other states. Therefore, VPSs based on geographic units should include all Part B services provided within those boundaries. One important issue for further research, however, is how much boundary crossing occurs.

### **Type of Target**

A fundamental issue in developing VPSs is whether to establish *growth rate* targets or *expenditure or utilization* targets. Growth rate

targets are conceptually attractive because the objective of VPS is to control the growth in expenditures. However, growth rate targets establish current utilization patterns as the basis for evaluating future performance and thus do not address the issue of whether those utilization patterns are appropriate or equitable. Targets based on national rates of per capita utilization (measured in RBRVS units), adjusted for population mix of the risk group, could lead to greater equity in Part B benefits. Establishing each risk group's target based on national utilization patterns is also practical given the unreliability of data for more disaggregate units.

The considerable variation observed in annual expenditures within a state suggests that differences between the target and performance measures should not be fully factored in updating payments. One option for dealing with the variation is to develop a form of "stop-loss" insurance, similar to the outlier payment policy in effect under Part A. This policy would protect groups from exceeding their VPS due to "catastrophic" cases.

### **Type of Service .**

OBRA89 established separate VPSs for surgical and medical services. Because these separate VPSs will be used to adjust future prices (i.e., through separate updates to the conversion factor), this policy will distort the original RBRVS over time and thus seems contrary to the original goals of physician payment reform. Furthermore, because certain specialties provide primarily surgical or medical services, this policy reintroduces an aggregate form of specialty differentials into the payment system. Separate VPSs by type of service provide flexible targeted incentives without distorting the original RBRVS if they were used to establish expenditure ceilings instead of to adjust future prices. However, because separate standards rely on political rather than clinical judgment about the appropriate mix of services, we recommend a global standard.

### **APPLICATION OF THE STANDARD**

The third and perhaps most important dimension concerning VPSs is how to apply them. Under current law, VPSs will be used to adjust future prices. Successful models in other countries have adopted expenditure ceilings, which necessarily control program costs. The effect on physicians' practice patterns, however, are not known. Obviously, expenditure ceilings present a major political battle that Congress may not be willing to tackle unless the current method of



using VPSs to adjust future prices proves unsuccessful in controlling Medicare program costs. In this climate, we believe that some experience with the current application should be gained before recommending changes.

### **PHYSICIAN RESPONSE TO THE FEE SCHEDULE AND VPSs**

In closing, this report presents a conceptual framework for analyzing the expected impact of each major component of VPSs. There remains a great deal of uncertainty about how physicians will respond to the new fee schedule and to the VPS. Furthermore, the success or failure of the current method of defining and applying VPSs is unlikely to be known for several more years. The interim period, therefore, provides a unique opportunity to conduct empirical research to determine how physicians actually respond to the economic incentives of the new payment system. The findings from research on the early impact of the fee schedule and VPSs should prove invaluable in developing future refinements.



## BIBLIOGRAPHY

- Anderson, Gerard F., Earl P. Steinberg, Neil R. Powe, et al., "Setting Payment Rates for Capitated Systems: A Comparison of Various Alternatives," *Inquiry*, 27:225-233, Fall 1990.
- Barer, Morris L., Robert G. Evans, and Roberta J. LaBelle, "Fee Controls as Cost Control: Tales from the Frozen North," *The Milbank Quarterly*, 66(1):1-64, 1988.
- Burney, Ira, Peter Hickman, Julia Paradise, and George Schieber, "Medicare Physician Payment, Participation, and Reform," *Health Affairs*, 3(4):5-24, 1984.
- Carter, Grace M., Joseph P. Newhouse, and Daniel A. Relles, *How Much Change in the Case Mix Index is DRG Creep?* RAND, R-3826-HCFA, April 1990.
- Congressional Budget Office, *Physician Reimbursement Under Medicare: Options for Change*, Congress of the United States, April 1986.
- Egdahl, Richard H., and Cynthia H. Taft, "Financial Incentives to Physicians," *New England Journal of Medicine*, 315(1):59-61, 1986.
- Enthoven, Alain C., "What Can Europeans Learn from Americans?" *Health Care Financing Review*, Annual Supplement, 1989, pp. 49-77.
- Evans, Robert G., Jonathan Lomas, Morris L. Barer, et al., "Controlling Health Expenditures: The Canadian Reality," *New England Journal of Medicine*, 320(9):571-577, 1989.
- Fox, Peter D., *Physician Reimbursement Under Medicare: An Overview and a Proposal for Area-Wide Physician Incentives*, Proceedings of the Conference on the Future of Medicare, Subcommittee on Health of the Committee on Ways and Means, U.S. House of Representatives, 98th Congress, 2d Session, pp. 108-119, February 1, 1984.
- Gabel, Jon. R., and Thomas H. Rice, "Reducing Public Expenditures for Physician Services: The Price of Paying Less," *Journal of Health Politics, Policy and Law*, 9(4):595-609, 1985.

- Ginsburg, Paul B., and Philip R. Lee, "Defending U.S. Physician Payment Reform," *Health Affairs*, 8(4):67-71, Winter 1989.
- Glaser, William A., "The Politics of Paying American Physicians," *Health Affairs*, 8(3):129-146, Fall 1989.
- Gray, Bradford H., and Marily J. Field, *Controlling Costs and Changing Patient Care? The Role of Utilization Management*, Institute of Medicine, National Academy Press, Washington, D.C., 1989.
- Hadley, Jack, *Critique of Peter Fox's "Physician Reimbursement Under Medicare: An Overview and a Proposal for Area-Wide Physician Incentives,"* Proceedings of the Conference on the Future of Medicare, 98th Congress, 2d Session, Subcommittee on Health, Committee on Ways and Means, U.S. House of Representatives, pp. 120-128, February 1, 1984.
- Hammons, Glenn T., Robert H. Brook, and Joseph P. Newhouse, *Selected Alternatives for Paying Physicians Under the Medicare Program: Effects on the Quality of Care*, RAND, R-3394-OTA, June 1986.
- Hemenway, David, Alice Killen, Suzanne B. Cashman, et al., "Physicians' Responses to Financial Incentives," *The New England Journal of Medicine*, 322(15):1059-1063, April 12, 1990.
- Hillman, Alan L., Mark V. Pauly, and Joseph J. Kerstein, "How Do Financial Incentives Affect Physicians' Clinical Decisions and the Financial Performance of Health Maintenance Organizations?" *The New England Journal of Medicine*, 321(2):86-92, July 13, 1989.
- Holahan, J., J. Hadley, W. Scanlon, et al., "Paying for Physician Services Under Medicare and Medicaid," *Milbank Memorial Fund Quarterly/Health and Society*, 57(2):183-211, 1979.
- Hosek, Susan D., M. Susan Marquis, and Kenneth B. Wells, *Health Care Utilization in Employer Plans with Preferred Provider Organization Options*, RAND, R-3800-HHS/NIMH, February 1990.
- Hsiao, William C., "Objective Research and Physician Payment: A Response From Harvard," *Health Affairs*, 8(4):72-75, Winter 1989.
- Iglehart, John K., "Conference Summary, American Business Looks Abroad," *Health Affairs*, 8(4):165-172, Winter 1989.
- Jonsson, Bengt, "What Can Americans Learn From Europeans?" *Health Care Financing Review*, Annual Supplement, pp. 79-93, December 1989.



- Kirkmann-Liff, Bradford L., "Physician Payment and Cost-Containment Strategies in West Germany: Suggestions for Medicare Reform," *Journal of Health Politics, Policy, and Law*, 15(1):69–99, Spring 1990.
- Lomas, Jonathan, Catherine Fooks, Thomas Rice, and Roberta J. LaBelle, "Paying Physicians in Canada," *Health Affairs*, 8(1):80–102, Spring 1989.
- Lubitz, J., J. Beebe, and G. Riley, "Improving the Medicare HMO Payment Formula," *Advances in Health Economics and Health Services Research*, Vol. 6, R. M. Scheffler and L. F. Rossiter (eds.), Jai Press, Greenwich, Conn., 1985.
- Luft, Harold S., *Health Maintenance Organizations: Dimensions of Performance*, New York: John Wiley & Sons, Inc., 1981.
- Manning, Willard S., Arleen Leibowitz, George Goldberg, et al., "A Controlled Trial of the Effect of a Prepaid Group Practice on Use of Services," *New England Journal of Medicine*, 310:1505–1510, June 9, 1984.
- McCombs, Jeffrey S., and Jon B. Christianson, "Applying Competitive Bidding to Health Care," *Journal of Health Politics, Policy and Law*, 12(4):703–722, Winter 1987.
- Moore, S. H., D. P. Martin, and W. C. Richardson, "Does the Primary-Care Gatekeeper Control the Costs of Health Care? Lessons from the SAFECO Experience," *The New England Journal of Medicine*, 309:1400–1404, 1983.
- Newhouse, Joseph P., "The Economics of Group Practice," *Journal of Human Resources*, 8:37–56, 1973.
- Newhouse, Joseph P., *Capitation and Medicare*, RAND, R-3455-HCFA, October 1986.
- Nyman, John A., Roger Feldman, Janet Shapiro, et al., "Changing Physician Behavior: Does Medical Review of Part B Medicare Claims Make a Difference?" *Inquiry*, 27(2):127–137, Summer 1990.
- Pfaff, Martin, "Differences in Health Care Spending Across Countries: Statistical Evidence," *Journal of Health Politics, Policy and Law*, 15(1):1–68, Spring 1990.
- Physician Payment Review Commission, *Annual Report to Congress, 1991*, Washington, D.C., March 1991.
- Physician Payment Review Commission, *Annual Report to Congress, 1990*, Washington, D.C., March 1990.



- Physician Payment Review Commission, *Annual Report to Congress, 1989*, Washington, D.C., April 1989.
- Physician Payment Review Commission, *Annual Report to Congress, 1988*, Washington, D.C., March 1988.
- Reinhardt, U. E., "The Theory of Physician-Induced Demand: Reflections After a Decade," *Journal of Health Economics*, 4(2):187-193, 1985.
- Reinhardt, Uwe E., "Commentary on: Bengt Jonsson, 'What Can Americans Learn From Europeans?'" *Health Care Financing Review*, Annual Supplement, pp. 97-104, December 1989.
- Rice, T., and N. McCall, "Changes in Medicare Reimbursement in Colorado: Impact on Physicians' Economic Behavior," *Health Care Financing Review*, 4:67-85, June 1982.
- Rice, Thomas, and Jill Bernstein, "Volume Performance Standards: Can They Control Growth in Medicare Services?" *The Milbank Quarterly*, 68(3):295-319, 1990.
- Rodwin, Victor G., "Physician Payment Reform: Lessons from Abroad," *Health Affairs*, 8(4):76-83, Winter 1989.
- Rolph, Elizabeth, *Introducing the Preferred Provider Organization Option into Health Benefit Plans: Three Case Studies*, RAND, N-2958-HHS, February 1990.
- Rubin, Robert, and Glenn Hackbarth, "Review: The Federal Government," *Health Affairs*, 3(2):38-45, Summer 1984.
- Scheffler, Richard M., Sean D. Sullivan, and Timothy H. Ko, "The Impact of Blue Cross and Blue Shield Plan Utilization Management Programs, 1980-1988," *Inquiry*, 28(3):263-275, Fall 1991.
- Schwartz, J. Sanford, "The Role of Professional Medical Societies in Reducing Variations," *Health Affairs*, 3(2):90-101, Summer 1984.
- Stone, D. A., "Health Care Cost Containment in West Germany," *Journal of Health Politics, Policy, and Law*, 4:176-199, 1979.
- Thomas, J. W., and R. Lichtenstein, "Functional Health Measure for Adjusting Health Maintenance Organization Capitation Rates," *Health Care Review*, 7(3):85-95, Spring 1986.
- Waldo, Daniel R., Sally T. Sonnefeld, David R. McKusick, and Ross H. Arnett, "Health Expenditures by Age Group, 1977 and 1987," *Health Care Financing Review*, 10(4):111-120, 1989.

Welch, W. Pete, "The New Structure of Individual Practice Associations," *Journal of Health Politics, Policy and Law*, 12(4):723-739, Winter 1987.

Welch, W. Pete, "Defining Geographic Areas to Adjust Payments to Physicians, Hospitals, and HMOs," *Inquiry*, 28(2):151-160, Summer 1991.

Welch, W. Pete, "Prospective Payment to Medical Staffs: A Proposal," *Health Affairs*, 8(1):34-49, Spring 1989.

Wennberg, John E., "Dealing with Medical Practice Variations: A Proposal for Action," *Health Affairs*, 3(2):6-32, Summer 1984.

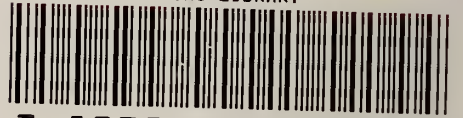






RAND/R-4154-HCFA

CMS LIBRARY



3 8095 00013013 4